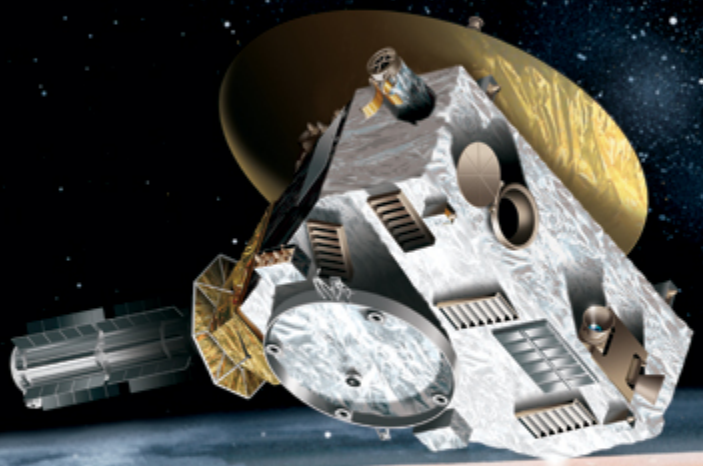
NEW HORIZONS

Richard Agudelo



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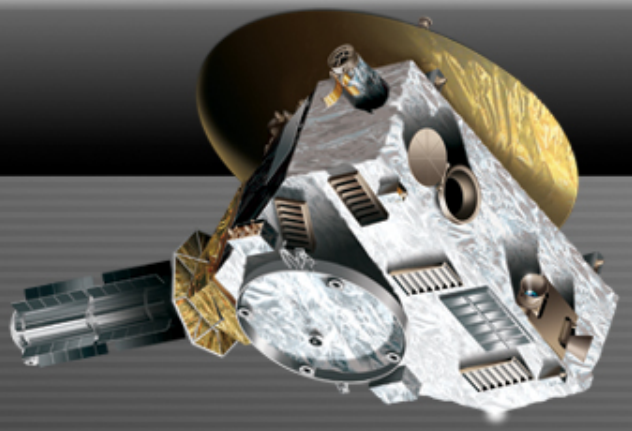
Credit: Johns Hopkins University Applied Physics Laboratory/Southwest Research Institute (JHUAPL/SWRI)

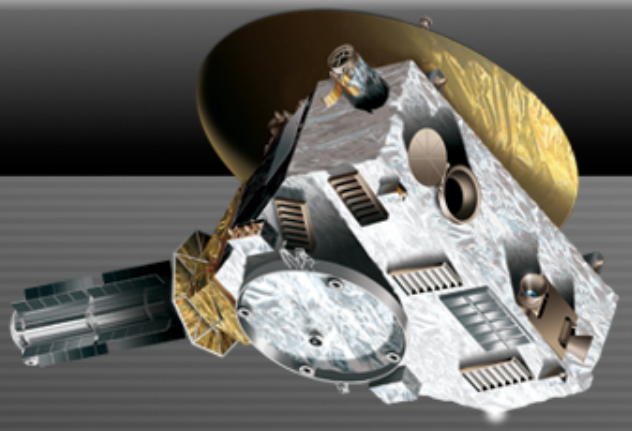
Section 1: Introduction

NASA / MUSPIN Program - APL



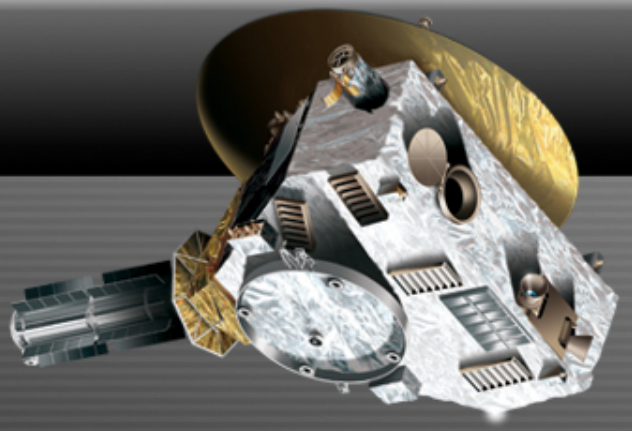
2. Projects:

1. Copy Load
2. Transfer Load
3. Transfer Products
4. DOORS Modules
5. Change Requirements (CR)
6. BuildSTOLScript
7. Points File / Eng Dump
8. Counter of lines of code



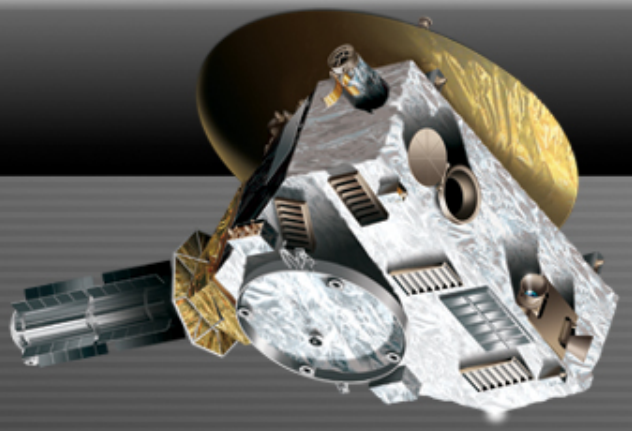
2.1 Copy load

Copies “load” STOL procedures and input binary files to pre-determined locations on the same machine for either the transfer load script or other GSW planning tools.



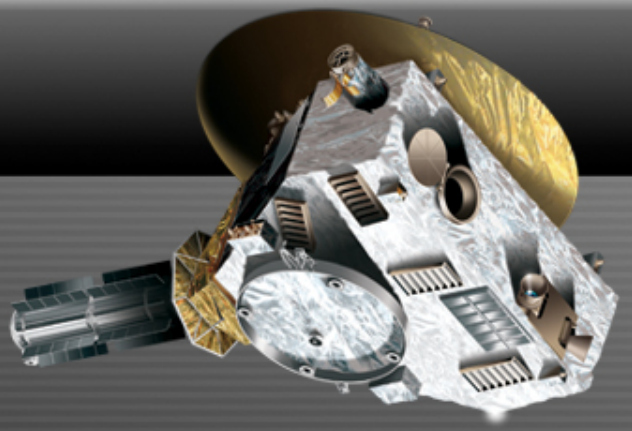
2.2 Transfer load

This Perl script transfers loads (binary file(s) and STOL procedures) from doppler to the machine from which it is invoked.



2.3 Transfer Products

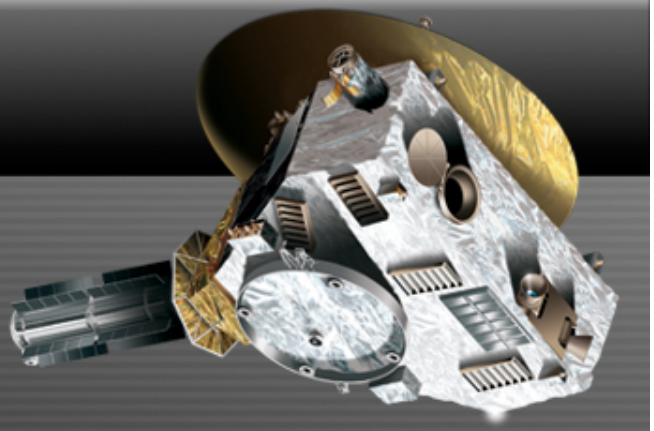
Transfers a STOL procedure or Display page from Doppler to pre-defined directories in the machine where it is invoked.

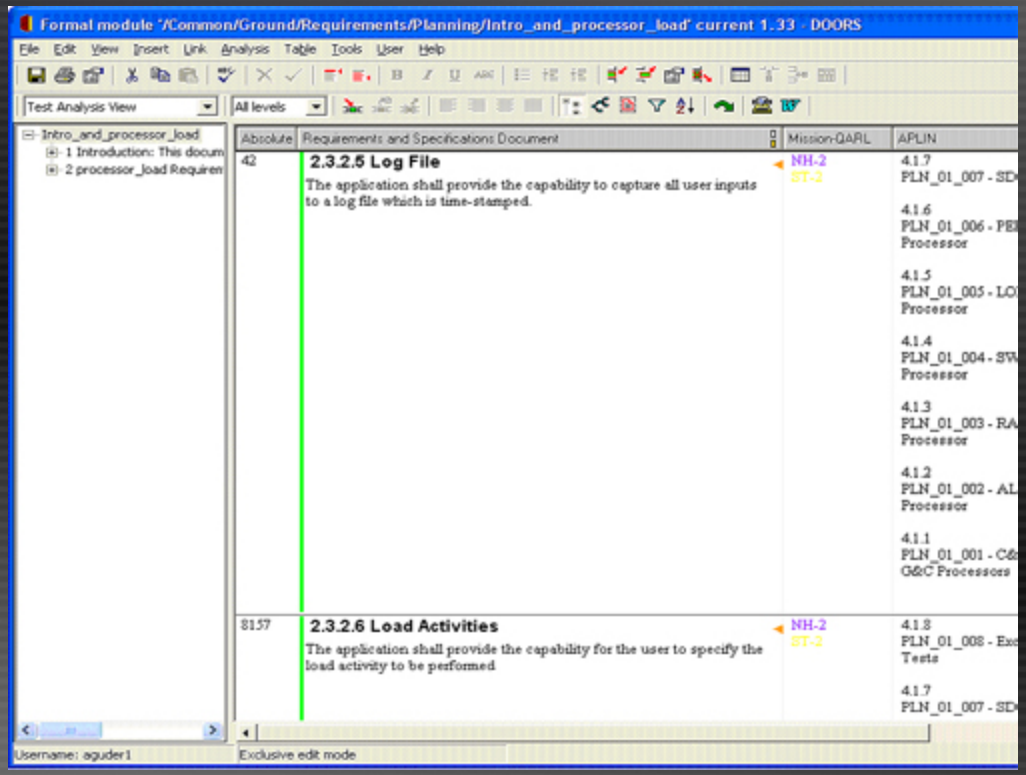


2.4 DOORS Modules

Divided 4 CSCI requirements documents (DOORS Modules) into multiple documents (one for each CSCI executable).

Allows requirements to be baselined at a CSC level. Minimizes the number of people working on a document at any one time)

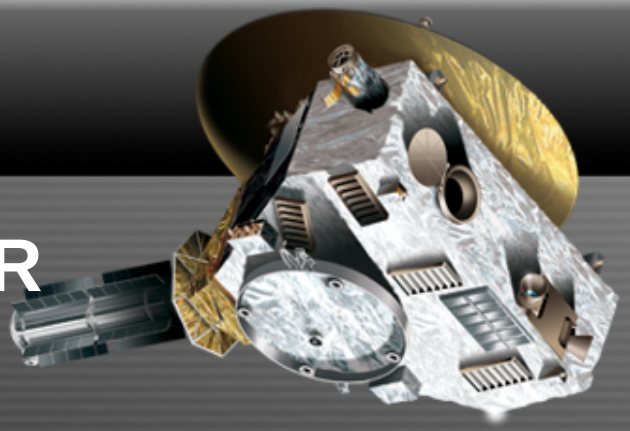




Tried using DXL scripts to copy the link information.

Interacted with Telelogic to find an automated solution.

Division of modules was done manually.

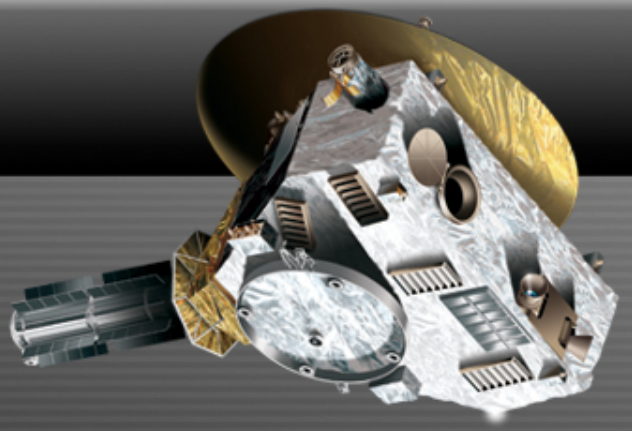


2.5 Verify information CR

Research if Telemetry Mnemonics exist for Instrument EEPROM last refresh

Research if Telemetry Mnemonic exist for sensor EEPROM last refresh

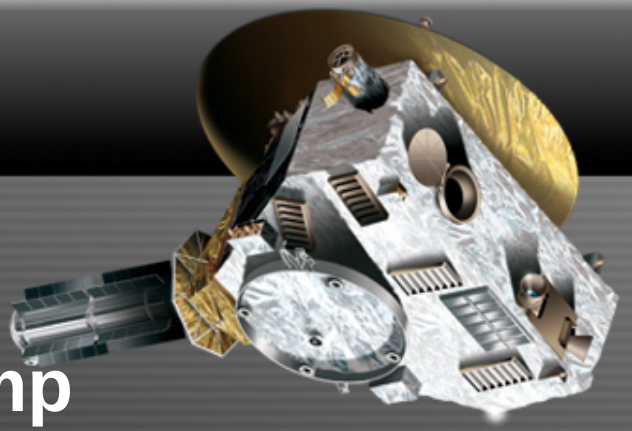
Communicate with people from other groups in the Space Department



2.6 BuildSTOLScript

This application produces an ASCII STOL LDC (load, dump and compare) procedure that loads ephemeris information to the spacecraft or hardware simulator.

Modified the name format of the generated procedure and updated the ephemeris load user guide and design document.

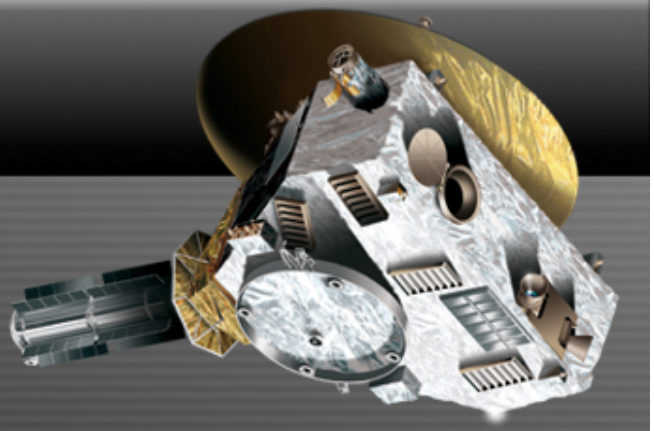


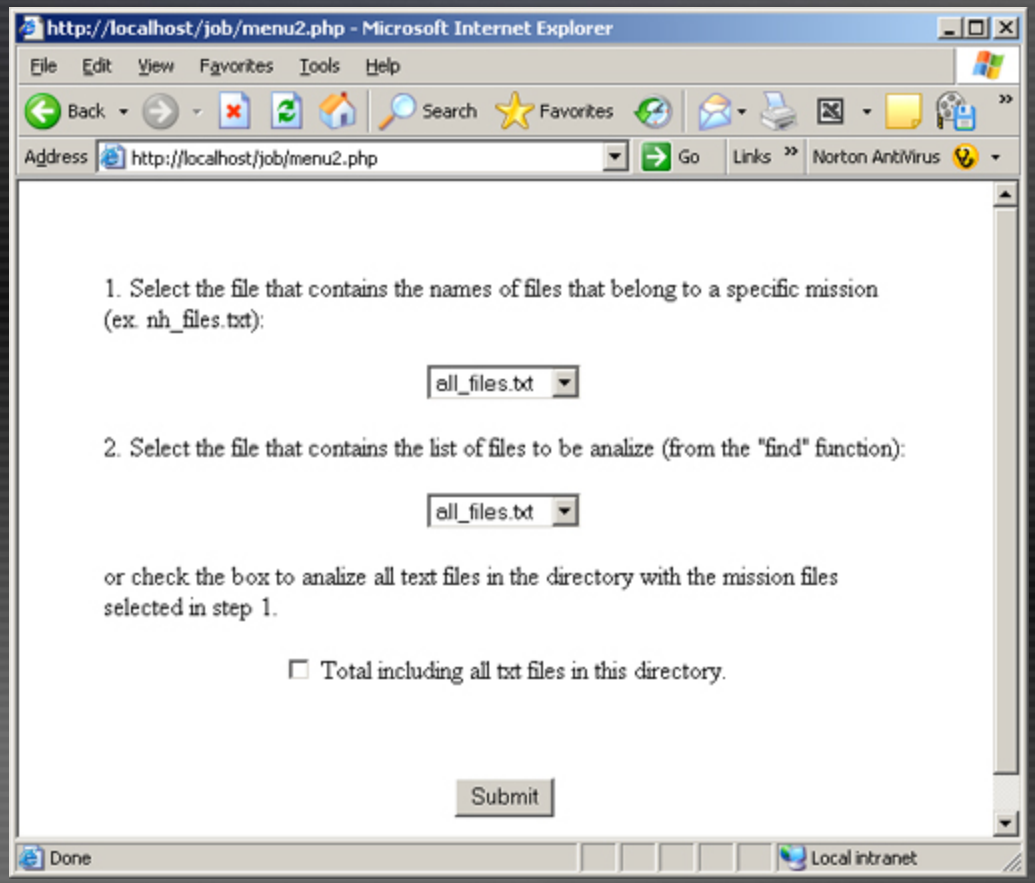
2.7 Points File / Eng Dump

Display error messages if the time variables given in command line or points file are incomplete or incorrect.

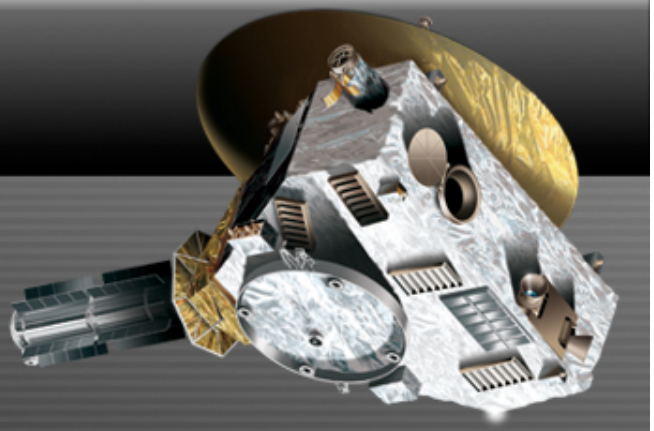
Start time after stop time.

2.8 Counter of lines of code





Created Script to determine the lines of code that are common across all missions and the lines of code that are New Horizons specific.



3. What did I learn?

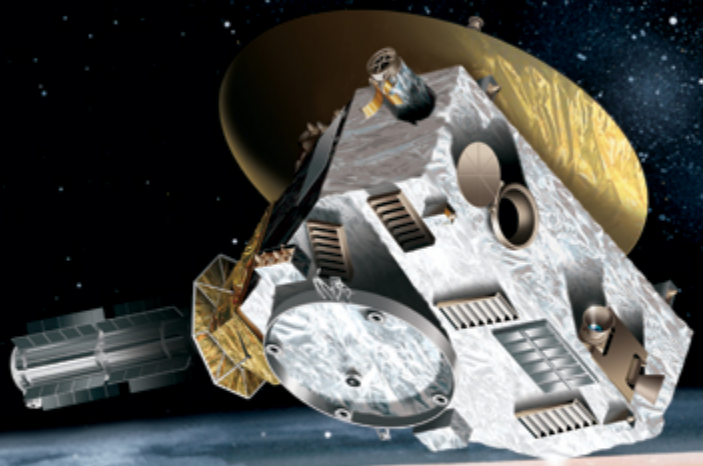
Technical skills: (Perl, DXL, Unix, C/C++, PHP, DOORS)

Communications Skills

Networking (AAC, HAC, Interns)

Space missions (“Brown Bags” – Tours)

NEW HORIZONS



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Section 4: Acknowledgments

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